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Two New Species of Selenocephalinae (Auchenorrhyncha, Cicadellidae) in Java, Indonesia

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Abstract. Two new species, *Parohinka kendengensis* sp. n. and *Drabescus yoshitakei* sp. n., collected from the Gunung Halimun National Park, West Java, Indonesia are described.

Key words: *Parohinka*, *Drabescus*, new species, Indonesia, West Java.

Introduction

The subfamily Selenocephalinae Fieber, 1872, this tree-feeding leafhopper subfamily is abundant in the tropics and subtropics, and 17 species under eight genera of three tribes have been recorded from Indonesia (Fletcher & Larivière, 2005). In Java, one species of *Drabescus* Stål, 1870, two of *Bhatia*, one of *Dryadomorpha*, and one of *Parohinka* Webb, 1981 have been known. However, this biodiversity of Selenocephalinae in Indonesia is very poor, comparing with both Asian and Pacific faunas, with 33 genera and 118 species in total.

Two field surveys of auchenorrhynchan fauna were performed in the Gunung Halimun National Park, West Java, Indonesia, which represents the largest sub-mountain forest remaining on Java Island and is very suitable for the habitation by selenocephaline leafhoppers given that fagaceous trees are rather abundant.

Selenocephalinae have been treated as a subfamily of Cicadellidae (Webb, 1981; Zhang & Webb, 1996; Shang *et al.*, 2003). Recently, Dietrich *et al.* (2001) indicated that the Selenocephalinae may be included in single clade comprising of some subfamilies, such as Deltocephalinae. As the higher classification of this family has not settled yet, *Parohinka* and *Drabescus* are treated in Selenocephalinae.

Parohinka kendengensis Kamitani, sp. n. (Figs. 1-2, 5-10)

Body pale green. Clypeus, clypellus, lora, gena, vertex, pronotum, and scutellum immaculate. Forewing brownish semitransparent, with three brown spots at apex of both clavus and claval veins; ventral surface of thorax, legs, and abdominal segments pale green.

Head wider than pronotum, 1.1 times as wide as pronotum; ocelli situated on margin of vertex, distant from eyes, slightly visible from above. Vertex roundly produced, medial length 0.44 times as long as length next to eyes; anterior margin of vertex transversely striate; coronal suture on posterior margin of vertex short. Face shagreen; face in profile more or less straight; trans-clypeal suture distinct; antennal pit deep with indistinct antennal ledge; antennae long, nearly half body length or more.

Pronotum about twice as wide as long, irregularly and transversely striate posteriorly, shagreened anteriorly; lateral margin weakly carinate, short. Scutellum shorter than pronotal length, shagreen. Fore wing with three subapical cells, first subapical cell open, second and third subapical cells closed; appendix of forewing narrow. Hind femur with apical setal formula 2 + 2 + 1.

Male genitalia. Pygofer lobe small with 17 macrosetae on posterior half and several short fine hairs along ventral margin; caudoventral margin not dentate. Valve



Figs. 1-4. Indonesian Selenocephalinae. 1-2, *Parohinka kendengensis* sp. n.; 3-4, *Drabescus yoshitakei* sp. n.

triangular. Subgenital plate slender, triangular, apical region digitate and weakly sclerotized; ventral surface with several short setae on outer margin and apical region. Style robust; apical process short, strongly pointed apically, directing outside. Connective Y-shaped, articulated with aedeagus; arms short, and expanded laterally. Aedeagus asymmetrical, flattened, with one process on right side and two processes on left side; each process directed anterolaterally; aedeagal shaft almost straight, similar width throughout length in lateral view, rounded apically; basal apodeme stout and slightly compressed anteroposteriorly; gonopore situated at subapex near the apical left process.

Body length to tip of folded forewing. , 6.2 mm.

Holotype. , [W. Java: Indonesia] Gn. Kendeng (alt. 1,300m), Gn. Halimun National Park, 11 viii. 1997 [SW-E], Coll. S. Kamitani. The holotype is deposited in the Museum, Zoologicum Bogoriense, Research Center for Biology, Indonesian Institute of Science, Cibinong, Indonesia.

Distribution. Indonesia: W. Java (Gunung Halimun National Park).

Remarks. In Java, only one species, *Parohinka longiseta* (Melichar, 1914) has been recorded, and is quite different from *P. javana* in the shape of the male genitalia. This new species is similar to *P. brevicephala* Webb, 1981 from Borneo and *P. dulita* Webb, 1981 from Borneo. It is, however, easily distinguishable from other congeners by the following characters; 1) a wide aedeagal shaft nearly straight in the lateral view, 2) an aedeagal shaft with one left process and two right processes that are the same in length, and 3) a gonopore that is located subapical and lateral.

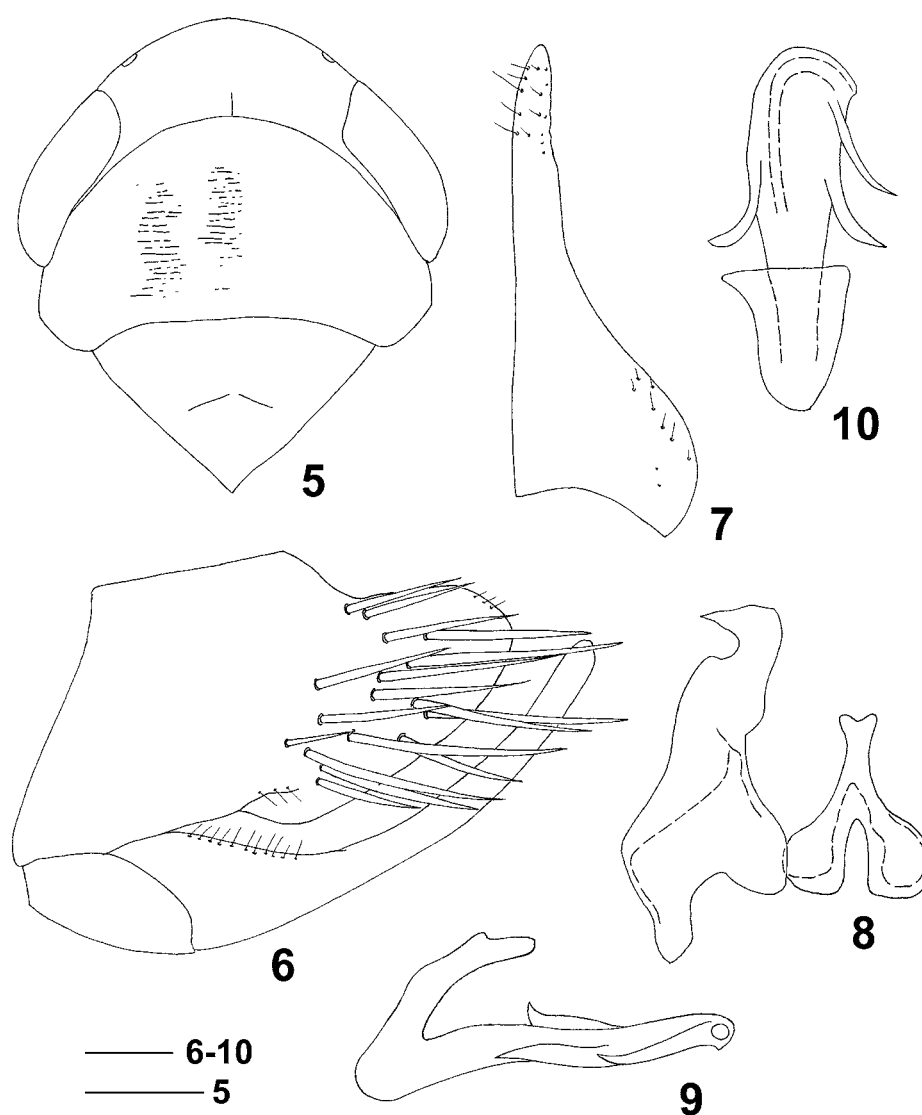
The genus *Parohinka* was distinguishable from the other genera of the tribe Paraboloponini by the following five characters (Webb, 1981): 1) the aedeagus is asymmetrical; 2) the subgenital plates are longer than the pygofer; 3) the male pygofer lobe provides no processes; 4) the posterior margin of female pregenital sternite without a sprotuberance each side of midline; 5) dorsal margin of 2nd valvulae has no anterior prominence. In this species, the three taxonomic characters of male could be observed among these five characters. Therefore, this new species should be classified as *Parohinka*, although the shape of vertex is slightly different in the other congeners.

Etymology. The specific name, *kendengensis*, is derived from the type locality, Mt. Kendeng.

***Drabescus yoshitakei* Kamitani, sp. n.**
(Figs. 3-4, 11-16)

Body brown. Clypeus brown with a transverse black band and a large black marking on each center; clypellus brown with a large black marking on each center; lora and gena white; vertex brown, with a black anterior marginal stripe; boundary between clypeus and vertex white; pronotum and scutellum brown with numerous pale white spots; anterior margin of pronotum white. Forewing brownish semitransparent, with a longitudinal hyaline stripe in the middle; veins dark brown with whitish yellow spots. Ventral surface of thorax and abdominal segments blackish.

Head wider than pronotum, 1.1 times as wide as pronotum; ocelli situated on margin of vertex, distant from eyes. Vertex roundly produced, medial length 0.28 times



Figs. 5-10. *Parohinka kendengensis* sp. n. 5, head, pronotum and mesonotum in dorsal view; 6, pygofer in lateral view; 7, genital plates in ventral view; 8, styles and connective in dorsal view; 9, aedeagus in lateral view; 10, aedeagus in dorsal view.

as long as length next to eyes; shagreen, transversely striate anteriorly. Face wider than long, shagreen; upper margin depressed medially with a few transverse striations; face in profile more or less straight; transclypeal suture distinct; antennal pit deep with distinct antennal ledge; antennae distinctly shorter than half body length.

Pronotum about twice as wide as long, side margins short, strongly carinate, irregularly and transversely striate, not shagreen anteriorly. Scutellum almost equal in pronotal length, shagreen. Fore wing with three subapical cells, first and third subapical cells open, second subapical cell closed; appendix of forewing broad. Hind femur with apical setal formula 2 + 1.

Male genitalia. Pygofer lobe small with no macro-

setae and several short fine hairs; caudoventral margin weakly serrated. Valve triangular. Subgenital plate moderately long, triangular, apical region digitate and weakly sclerotized; ventral surface with several short setae on outer margin and a few long fine setae on basal outer margin. Style robust; apical process very short, directing to outside. Connective Y-shaped with broad stem, articulated with aedeagus; arms short, slender, extended parallel. Aedeagus slender; aedeagal shaft tapered to apically at basal half, cylindrical, sinuate and gently curved dorsad, with a pair of long processes directing posteriorly; basal apodeme long and compressed anteroposteriorly; gonopore situated subapical and ventral.

Body length to tip of folded forewing (mean).

6.9-7.3 mm (7.1 mm); ♀, 8.4 mm.

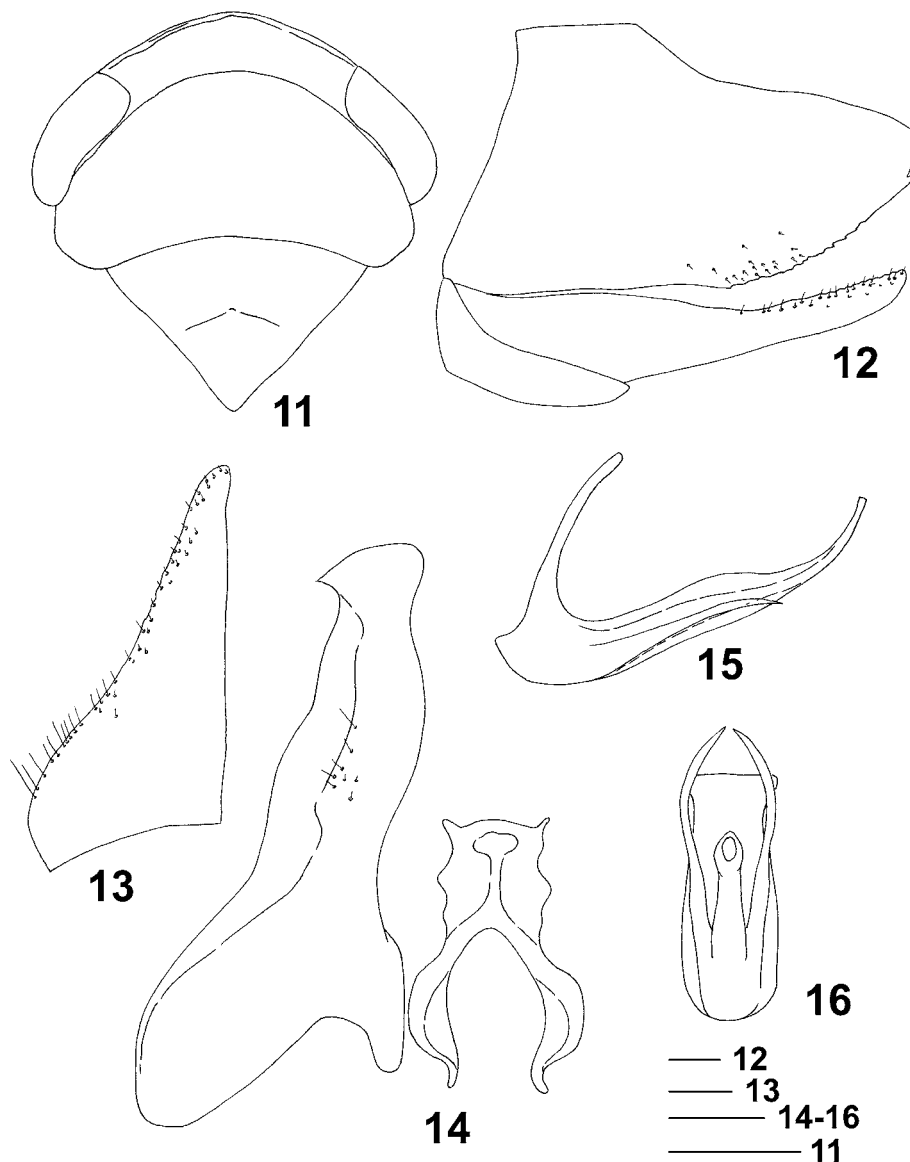
Holotype. ♂, [W. Java: Indonesia] Cikaniki (alt. 950m), Gn. Halimun National Park, 17 iii. 2003, Coll. A. Matsunaga. **Paratypes.** [W. Java] 1 ♂, Cikaniki (alt. 1,100m), Gn. Halimun National Park, 10 viii. 1997, Coll. S. Kamitani; 1 ♂, Gn. Kendeng (alt. 1,300m), Gn. Halimun National Park, 13 viii. 1997, Coll. S. Kamitani; 1 ♂, Cikaniki (alt. 950m), Gn. Halimun National Park, 17 iii. 2003, Coll. H. Yoshitake. **Type depositary.** The holotype and a part of paratypes are deposited in the Museum, Zoologicum Bogoriense, Research Center for Biology, Indonesian Institute of Science, Cibinong, Indonesia. Other paratypes are in the collection of En-

tomological Laboratory, Faculty of Agriculture, Kyushu University, Fukuoka, Japan.

Distribution. Indonesia: W. Java (Gunung Halimun National Park).

Remarks. This new species is similar to *D. shillongensis* Rao, 1989 from India in the shape of male genitalia but distinguished by a short apical process of style, aedeagus tapering at the basal half and the absence of an inner pygofer process and so on.

Etymology. The specific name, *yoshitakei*, honors Dr. Hiraku Yoshitake who is a collector of the material.



Figs. 11-16. *Drabescus yoshitakei* sp. n. 11, head, pronotum and mesonotum in dorsal view; 12, pygofer in lateral view; 13, genital plates in ventral view; 14, styles and connective in dorsal view; 15, aedeagus in lateral view; 16, aedeagus in posterior view.

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References

- Dietrich, C.H., R.A. Rakitov, J.L. Holmes & W.C. Black IV., 2001. Phylogeny of the major lineage of Membracoidea (Insecta: Hemiptera: Cicadomorpha) based on 28S rDNA sequences. *Mol. Phylogenetics Evol.*, **18**: 293-305.
- Fletcher, M. & M.-C. Larivière, 2005. Identification key and checklists for the leafhoppers and treehoppers of Australia and neighbouring areas (Hemiptera: Cicadellidae, Membracidae). Key and checklist published at <http://www.agric.nsw.gov.au/Hort/ascu/leafhop/cica0.htm>.
- Webb, M.D., 1981. The Asian, Australian and Pacific Paraboloponinae (Homoptera: Cicadellidae), a taxonomic revision with a key to all the known genera of the subfamily. *Bull. Br. Mus. Nat. Hist. (Entomol.)*, **43**: 39-76.
- Zhang, Y. & M.D. Webb, 1996. A revised classification of the Asian and Pacific selenocephaline leafhoppers (Homoptera: Cicadellidae). *Bull. Nat. Hist. Mus. Lond. (Entomol.)*, **65**: 1-103.